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10/789,059	02/27/2004	Zong Liang Wu	9235	9159
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MICHAEL W LANDRY 5098 SEACHASE STREET SAN DIEGO, CA 92130			EXAMINER WEIDNER, TIMOTHY J	
			ART UNIT	PAPER NUMBER
			2609	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/789,059

Applicant(s)

WU ET AL.

Examiner

Timothy Weidner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4, drawn to a method of network bridging, classified in class 370, subclass 254.
- II. Claims 5 and 6, drawn to bus branches and backbone, classified in class 370, subclass 257.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are directed to related processes. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed have a different mode of operation. Invention II requires a bus system, while Invention I does not. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

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During a telephone conversation with Micheal Landry on July 23, 2007, a provisional election was made without traverse to prosecute the invention of Group II, claims 5 and 6. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-4 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the methods of claims 5 and 6 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

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changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 6 is objected to because of the following informalities: there are two steps labeled (h). Appropriate correction is required.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 6 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 7,251,703. Although the conflicting claims are not identical, they are not patentably distinct from each other because every claim limitation of the instant claim 6 is recited in claim 2 of the patent. The difference between the claims is that claim 2 of the patent has additional limitations, such that the instant claim 6 is broader.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 6 is rejected under 35 U.S.C. 102(e) as being anticipated by Bennet (U.S. 6,738,843 B2).

Regarding claim 6, Bennett teaches a method of bridging 1394 devices that are not bridge aware from one 1394 bus branch through a backbone bus to another 1394 bus branch, each 1394 bus branch having a bridge device comprising a 1394 portal and a backbone portal, the bridge device having control over 1394 devices in the branch, the method comprising the steps of:

- (a) assigning a cycle master (CM) to control the backbone bus (column 3, lines 31-40);
- (b) assigning a backbone bus node number to other backbone nodes (column 1, line 66)

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through column 2, line 15);

(c) the CM requests a first bridge device to initiate a bus configuration, the bridge device performing the sequence (column 2, lines 4-15) comprising:

resetting each 1394 device (column 1, lines 54-58);

tree-identification of 1394 devices (column 1, lines 59-60);

self-identification of 1394 devices controlled by a branch root node, the self-identification comprising a physical-identification (column 1, lines 60-66; column 2, lines 16-20);

collecting self-identification packets in the branch root node (column 2, lines 16-29);

transmitting the collection of local self-identification packets to the CM (column 2, lines 1-15);

(d) forming a database of self-identification packets from all nodes in the network (column 2, lines 4-7);

(e) accumulating and transmitting the database of self-identification packets to a second bridge device (column 5, lines 45-60);

(f) the CM requests the second bridge device to initiate a bus configuration wherein the 1394 portal becomes the branch root node (column 5, lines 45-60); the root node causes the received database of self-identification packets to be transmitted to all local nodes in the branch causing the local nodes to begin self-identification at an address above the highest address in the received database (column 5, lines 45-60); the local nodes transmit self-identification packets (column 5, lines 45-60);

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(g) accumulating into the database the self-identification of the local nodes and transmitting the accumulated database to a third bridge device (column 5, lines 45-60);

(h) repeating steps (f) and (g) for all branches connected to the backbone network (column 5, lines 45-60);

(i) the CM sends an accumulated self-identification database to all branch root nodes (column 2, lines 1-15); each branch root re-transmits self-id packets from branch 0 and branches with higher branch numbers (column 5, lines 29-33);

whereby each local node address is unique and is part of a single logical bus (column 2, lines 4-20; column 4, lines 13-15).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennet (U.S. 6,738,843 B2) in view of Sato et al. (U.S. 7,043,542 B2, herein "Sato").



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Regarding claim 5, Bennet teaches a method of bridging 1394 devices that are not bridge aware from one 1394 bus branch through a backbone bus to another 1394 bus branch, each 1394 bus branch having a bridge device comprising a 1394 portal and a backbone portal, the bridge device having control over 1394 devices in the branch, the method comprising the steps of:

assigning a cycle master (CM) to control the backbone bus (column 3, lines 31-40);

assigning a backbone bus node number to other backbone nodes (column 1, line 66 through column 2, line 15);

the CM requests all bridge devices to initiate a bus configuration, the bridge devices performing the sequence (column 2, lines 4-15) comprising:

resetting each 1394 device (column 1, lines 54-58);

tree-identification of 1394 devices (column 1, lines 59-60);

self-identification of 1394 devices controlled by a branch root node, the self-identification comprising a physical-identification (column 1, lines 60-66; column 2, lines 16-20);

collecting self-identification packets in the branch root node (column 2, lines 16-29);

transmitting the collection of local self-identification packets to the CM (column 2, lines 1-15);

forming a database of self-identification packets from all nodes in the network (column 2, lines 4-7);

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transmitting the database of self-identification packets to all bridge devices (column 5, lines 45-60); and

initiating, by each bridge, another bus configuration wherein the branch root additionally transmits translated self-id packet corresponding to remote nodes (column 4, lines 21-36).

Bennet does not teach the remaining features of the claim. Sato, which is in the same field of endeavor, teaches translating, in each bridge, the physical-id of each remote node to a virtual local node id that is unique within the branch (column 10, lines 38-61); adding a phantom node to the list of virtual node ids (column 7, lines 3-14); and whereby each local node addresses remote nodes using virtual local node ids (column 11, lines 25-31) for the purpose of, when bus resetting has occurred in a bus connected to a reserve owner, allowing a node of another bus connected to the bridge to find the reserve owner (column 1, lines 47-52). It would have been obvious to one of ordinary skill in the art at the time the invention was made to, in addition to the method taught by Bennet, translate, in each bridge, the physical-ids of each remote to virtual ids that are unique within each branch, add a phantom node to the list of virtual ids, and have each local node address remote nodes using virtual ids to, when a bus reset has occurred in a bus connected to a reserve owner, allow a node of another bus connected to the bridge to find the reserve owner.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rudland et al. (US No. 6,925,518) disclose a bridging system for

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interoperation of remote groups of devices. Mosgrove (US No. 6,418,493) discloses method and apparatus for robust addressing of a dynamically configurable bus. Lym et al. (US No. 6,973,087) disclose predictive time stamping of transmitted data. Henry et al. (US Pub No. 2005/0165965) disclose a method for communication in a multi-cluster network, device for connection to a network of clusters and bridge for connecting clusters. Saito et al. (US Pub No. 2003/0204660) disclose a data control device electronic instrument, and data transfer control method. Matsuda (US No. 6,920,509) discloses a device information acquisition method, device controller, and bridge.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Weidner whose telephone number is (571) 270-1825. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on (571) 272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJW

A handwritten signature in black ink, appearing to read "Yuwen Pan", with a stylized flourish extending from the end.